URIC ACID AS A PROGNOSTIC MARKER IN HEART FAILURE

ABSTRACT

BACKGROUND:

Heart failure is a problematic disease in both developed and developing countries worldwide with more than 20 million people affected each year. In developed countries the prevalence is 2%. Recently our understanding of heart failure has evolved to be more complex involving neuroendocrine and immune system activation. Now we had understood that not only the cardiovascular system is affected here, but peripheral tissues and other organs also contribute to symptoms and play a role in the pathogenesis and progression of the disease. Numerous studies show increasing evidence of role of uric acid as a marker of metabolic and hemodynamic derangements in heart failure patients. Uric acid can also be used as a predictor of survival in these patients.

AIM AND OBJECTIVES:

To estimate the level of uric acid in heart failure patients and the prognostic importance of uric acid to be assessed.

To identify the importance of uric acid as a prognostic marker in heart failure patients.
METHODOLOGY:
It is a prospective study conducted in 100 patients with heart failure with ejection fraction of < 55%. Significant differences between serum uric acid in different subgroups was observed over a period of one year and role of uric acid as a prognostic marker was evaluated.

RESULTS:
In my study hyperuricemia was observed in 38% of heart failure patients with EF < 55%. It was observed that NYHA class III and IV patients had increased uric acid levels. There was significant negative correlation between low ejection fraction and uric acid. Hyperuricemia was associated with increased mortality rates.

CONCLUSION:
The results clearly establishes the role of serum uric acid levels as a prognostic marker in heart failure patients. Regardless of whether uric acid levels are ready for clinical use, either as prognostic marker or diagnostic marker to find out the morbidity, complications and subsequent mortality in heart failure patients, with EF < 55% and specifically for NYHA III and IV heart failure with EF < 40%, the therapeutic intervention with uric acid reducers, xanthine oxidase inhibitors for the above ailment should be further explored with large multicentric, cross sectional,
double blind control prospective study. As this pathway can be used as a novel therapeutic target, further prospective studies are needed to validate that routine measurements of uric acid and the reduction of uric acid levels in this group of heart failure patients alters the morbidity and mortality rates.

**KEY WORDS:** Heart failure, Uric acid, Prognosis, Ejection Fraction